

REMARKS

Reconsideration of the application, in view of the arguments presented herein, is respectfully requested.

I. STATUS OF CLAIMS

Claims 10-33 are currently pending.

II. 35 U.S.C. 103(a) Rejections

(i) Claims 10 and 13-19 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,520,299 to Belcher et al. ("the Belcher patent") in view of U.S. Patent No. 6,143,705 to Morinaga ("the Morinaga patent").

(ii) Claims 11 and 12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Belcher and Morinaga as applied to claim 1 above, and further in view of Applicants' admitted prior art ("AAPR").

(iii) Claims 20, 23, 24, 27, 28, 29-33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Belcher in view of Moringa.

(iv) Claims 21, 22, 25 and 26 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Belcher and Morinaga as applied to claim 20 above, and further in view of the AAPR.

To establish prima facie obviousness of a claimed invention, all of the claim limitations must be taught or suggested by the prior art. (See MPEP 2143.03, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

However, the above combination of Belcher with Morinaga in the manner proposed in the instant Office Action fails to teach or suggest all of the features recited in claims 10 and 20.

In particular, Belcher at the very least fails to teach or suggest a method of selectively removing a damaged portion of a ferroelectric layer with a cleaning solution that comprises a fluoride, an organic acid having a carboxyl group, an alkaline pH adjusting agent and water. As conceded in the instant Office Action, Belcher fails to teach or suggest a method of removing a damaged portion of a ferroelectric layer with a cleaning solution which comprises an alkaline pH adjusting agent as recited in claims 10 and 20. **(See page 3, lines 14-16 of the instant Office Action).**

In addition, although Belcher describes different etching solutions which may include a fluoride such as hydrofluoric acid, water, or an organic acid having a carboxyl group such as acetic acid, Belcher does not teach or suggest using a cleaning solution having a combination of a fluoride, water, and organic acid having a carboxyl group together in the same cleaning solution as essentially recited in claims 10 and 20. Rather, Belcher describes the use of etching methods wherein fluoride compounds (e.g. hydrofluoric acid, ammonium fluoride, calcium fluoride), water, or an organic acid having a carboxyl group (e.g. acetic acid) are each used separately from one another in different etching compositions instead of being combined. (See Col. 1, lines 52-Col. 2, lines 1-7, Col. 3, lines 46-62, claims 2, 5, 13, 16, 20 and 23 of the **Belcher patent**). Indeed, Belcher is completely silent with regard to a cleaning method which utilizes a cleaning solution which comprises the combination of a fluoride, water and organic acid having a carboxyl group together in the same cleaning solution as essentially recited in claims 10 and 20.

Morinaga's alleged teaching with regard to an alkaline pH adjusting agent does not cure Belcher's failure to teach or suggest a cleaning method using a cleaning solution having the combination of a fluoride, water, and organic acid having a carboxyl group together in the same cleaning solution as essentially recited in claims 10 and 20. Rather, at best, for the reasons set forth above, the combination of Belcher with Morinaga as proposed in the instant Office Action would instead yield an etching method utilizing an etching solution which is still missing at least one or two of the four required components (a fluoride, water, alkaline pH adjusting agent, and an organic acid having the carboxyl group) of the cleaning solution used in the cleaning method recited in claims 10 and 20. Therefore, even if Belcher and Morinaga were combined in the

manner set forth in the instant Office Action, this combination would still fail to teach or suggest all of the features recited in claims 10 and 20.

As the combination of Belcher with Morinaga fails to teach or suggest all of the features recited in claims 10 and 20, withdrawal of rejection to these claims is respectfully requested. Furthermore, as claims 13-19 depend from and incorporate all of the limitations of independent claim 10, and claims 23, 24, 27, 28, 29-33 depend from and incorporate all of the limitations of independent claim 20, withdrawal of the rejection to these dependent claims is likewise requested

Lastly, with regard to the rejections to remaining claims 11, 12, 21, 22, 25 and 26, it is submitted that above combination of Belcher and Morinaga, in further view of the AAPR as proposed in the instant Office Action fails to teach or suggest all of the features recited in these claims.

As noted above, the combination of Belcher with Morinaga fails to teach or suggest a method of selectively removing a damaged portion of a ferroelectric layer with a cleaning solution that comprises a fluoride, an organic acid having a carboxyl group, an alkaline pH adjusting agent and water, as recited in claims 10 and 20. Therefore, as claims 11 and 12 depend from and incorporate all of the limitations of claim 10 and claims 21, 22, 25 and 26 depend from and incorporate all of the limitations of claim 20, these dependent claims are likewise patentable over the combination of Belcher and Morinaga.

Moreover, combining the AAPR with Belcher and Morinaga in the manner set forth in the instant Office Action would still fail to teach or suggest all of the features recited in claims 11, 12, 21, 22, 25 and 26 because the AAPR description of methods of manufacturing a ferroelectric capacitor and cleaning byproducts from the manufacturing method does not cure the above noted deficiencies of the Belcher and Morinaga combination. At the very least, the AAPR fails to teach or suggest a method of selectively removing a damaged portion of a ferroelectric layer with a cleaning solution that comprises a fluoride, an organic acid having a carboxyl group, an alkaline pH adjusting agent and water, as recited in claims 11, 12, 21, 22, 25 and 26. (See **page 1, lines 10-page 2, lines 1-12 of the present application**). Therefore, the combination of

the AAPR with Belcher and Morinaga as proposed in the instant Office Action fails to teach or suggest all of the features recited in claims 11, 12, 21, 22, 25 and 26 .

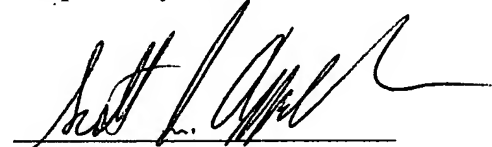
Withdrawal of rejection to claims 11, 12, 21, 22, 25 and 26 is respectfully requested.

III. CONCLUSION:

In summary, applicants respectfully submit that the instant application is in condition for allowance. Early notice to that end is earnestly solicited.

If a telephone conference would be of assistance in furthering prosecution of the subject application, applicant requests that the undersigned be contacted at the number below.

Respectfully submitted,



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